


Directions: Review the information provided in the scenario. Complete the items marked as  Practice. Discuss your responses with other participants.

Tier 1 Problem Solving Practice – 7th GRADE

STEP 1 – PROBLEM/GOAL IDENTIFICATION: What do we want students to know and be able to do? What do they currently know and are they able to do?

The Mathematics PLC meets weekly to monitor learning and plan instruction for all 6th, 7th and 8th grade students. The team is comprised of all general education and special education teachers who provide math instruction as well as the Math Coach. The PLC is meeting today to review data from a recent math assessment. This particular assessment tested the mastery of **MAFS.7.NS.1.3: Solve real-world and mathematical problems involving the four operations with rational numbers**. The data enable the team to examine the percentage of students in each of the classes who have mastered the standard as well as identify individual students who may need of additional support. (See reports Q1:A and Q1:B, respectively, on next two pages of this handout)

The PLC determines that this assessment was particularly challenging for Mrs. Smith's 7th grade math class. They noted that (1) fewer than 80% of Mrs. Smith's students were able to demonstrate mastery of **MAFS.7.NS.1.3** and that (2) one particular student, **Paul**, performed below the level of many of her peers. Paul is a student with a Traumatic Brain Injury and has an active IEP.

Based on the data, the PLC recognizes the need to engage in targeted problem solving to **support and improve Mrs. Smith's universal instruction related to**. Their expectation is that these changes will increase learning for all students, including Paul.

GOAL: *80% of Mrs. Smith's students will demonstrate mastery of **MAFS.7.NS.1.3** as measured by the Quarter 2 benchmark assessment.*

Expected level of performance: *80% of students or more will demonstrate mastery*

Current level of performance: *61% of students demonstrate mastery*

Monitor Student Mastery



Standard Score Comparison The Number System

Grade 7

Q1:A

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09/29/2017

% Mastery: 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

THE NUMBER SYSTEM											
MAFS.7.NS.1.1: Apply and extend previous understandings of . . .	75% 4 items										
MAFS.7.NS.1.2: Apply and extend previous understandings of mult . . .	70% 10 items										
MAFS.7.NS.1.3: Solve real-world and mathematical problems involving . . .	61% 6 items										

MASTERY CONFIDENCE



High Confidence:
Move forward with appropriate skill instruction.
Additional assessment is not necessary.



Medium Confidence:
Proceed with appropriate skill instruction, but with some degree of caution.
Additional practice/assessment will increase confidence.



Low Confidence:
More instruction/practice/assessment is required to have confidence in the Mastery Level.
Reassess following instruction/practice.



No data

MASTERY



Beginning



Developing



Secure

MASTERY %



English



Spanish

QUESTIONS ASKED

n items

NOTES

*Please go to help by clicking "?" at the top for an explanation of % Mastery, and how STAR Spanish Mastery and STAR English Mastery should be understood.

**Confidence in mastery score is determined by the amount, type, and recency of student activity for any given domain, standard, or skill.

7th Grade Classroom Data Sample by Student

Q1

Q1:B

		Question Number		1	2	3	4	5	6	7	8	9	10
		Correct Answer		d	a	c	c	b	d	b	a	d	b
		Standard		MAFS.7.NS.1.3 Understand	MAFS.7.NS.1.1 Apply	MAFS.7.NS.1.3 Apply	MAFS.7.NS.1.2 Understand	MAFS.7.NS.1.3 Describe	MAFS.7.NS.1.3 Apply	MAFS.7.NS.1.1 Understand	MAFS.7.NS.1.1 Describe	MAFS.7.NS.1.2 Apply	MAFS.7.NS.1.2 Understand
First Name	Last Name	Multiple Choice	Overall Proficiency	1	2	3	4	5	6	7	8	9	10
Kate	Smith	70%	70%				d			c		b	
Amber	Giles	100%	100%										
Kendra	Jones	80%	80%			a				c			
Miguel	Alba	90%	90%							c			
Paul	Bell	30%	30%		d	b		a	a	d		c	a
Amy	Milk	70%	70%		b				c		b		
Daniel	Peck	60%	60%	c	b		c						c
Chris	Wynn	80%	80%	c							c		
Lola	Lang	40%	40%	b	d	a	d			d		b	
Rob	Heart	50%	50%			a	c	a	c				d
Gabe	Snipe	100%	100%										
Cassy	Dole	60%	60%			b		c	c	d			
Nicole	Smith	80%	80%							c		c	
Lindsay	Doll	70%	70%				d			c		b	
Tyler	Miles	30%	30%		b	b		c	a	c	b	c	
Percentage correct		67%	67%	80%	67%	67%	67%	74%	67%	40%	80%	60%	80%

STEP 2 – PROBLEM ANALYSIS: Why is the desired goal not occurring?

*The team generated several hypotheses and corresponding prediction statements across multiple domains (Instruction, Curriculum, Environment, Learner) in order to determine **why** the problem was occurring.*

Hypothesis 1 Curriculum: The problem is occurring because the curriculum does not include the targeted skill.

Prediction Statement: If the curriculum was changed to include the target skill, then the problem would be reduced.

Hypothesis 2 Learner: The problem is occurring because the students lack the prerequisite skill necessary to master the skill.

Prediction Statement: If the students were provided instructional scaffolds for the prerequisite skills, then the problem would be reduced.

Hypothesis 3 Environment: The problem is occurring because the environment lacks the structure necessary for effective universal instruction.

Prediction Statement: If instructional routines are established and reinforced, then the problem would be reduced.



Practice: *Develop a hypothesis and corresponding prediction statement for the domain of instruction. (See ICEL UDL Crosswalk and ICEL UDL Instruction Handout for elements related to the domain of Instruction and **ideas for universal design.**)*

Hypothesis 1 - Instruction: The problem is occurring because


Prediction Statement: If

, then the problem would be reduced.

Step 3 – INTERVENTION DESIGN: What are we going to do about the problem?

The PLC uses various assessment methods (Review, Interview, Observe, Test) to either validate or refute the hypotheses during Step 2 (Problem Analysis) of the problem solving process. The hypothesis related to the domain of **Instruction** is validated.



 **Practice:** Complete the “Instructional Plan” section of the Comprehensive Planning Form based on the hypothesis you developed in the domain of instruction during Step 2.

Comprehensive Planning Form

Instructional Plan	Support Plan (For the teachers)	Fidelity Documentation	Plan for Determining Progress
<u>Who</u> is responsible?	<u>Who</u> is responsible? Mrs. Smith's fellow PLC members	<u>Who</u> is responsible? Mrs. Smith	<u>Who</u> is responsible? Mrs. Smith
<u>What</u> will be done?	<u>What</u> will be done? Review the instructional plan with Mrs. Smith, model implementation and observe Mrs. Smith's implementation and provide feedback	<u>What</u> will be done? Document implementation of the instructional plan in lesson plans	<u>What</u> data will be collected and <u>how</u> often? Benchmark assessment at the end of Quarter 2
<u>When</u> will it occur?	<u>When</u> will it occur? During weekly math PLC meetings	<u>When</u> will it occur? Upon completion of weekly lesson plans	<u>How</u> will we decide if the plan is effective? <i>Decision rules:</i> 80-100% = Positive response 60-79% = Questionable response 0-59% = Poor response
<u>Where</u> will it occur?	<u>Where</u> will it occur? Room 314	<u>How</u> will data be shared? Mrs. Smith will reference and share his lesson plans during weekly PLC meetings.	

Step 4 –RESPONSE TO INSTRUCTION: Is it working?

The team examined the Quarter 2 assessment data (see Reports Q2:A and Q2:B that follow) and used their pre-established decision rules to determine the student response and plan next steps. The progress monitoring results are indicated below

Decision rules:

80-100% = Positive response

60-79% = Questionable response

0-59% = Poor response



Practice: Using the team pre-established decision rules, examine the data above, determine if student response is positive, questionable or poor and recommend next steps.

1. Was the student response positive, questionable or poor? _____

2. What would you recommend as next steps for Mrs. Smith?

Monitor Student Mastery



Standard Score Comparison The Number System
Grade 7

Q2:A

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I am viewing Comprehensive Data for Math for 2 assignment types
for all students in Gr7 Class4 at Lions Middle School using the STAR



10/25/2017

% Mastery: 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

THE NUMBER SYSTEM											
MAFS.7.NS.1.1: Apply and extend previous understandings of . . .	70% 5 items									70%	
MAFS.7.NS.1.2: Apply and extend previous understandings of mult . . .	67% 8 items									67%	
MAFS.7.NS.1.3: Solve real-world and mathematical problems involving . . .	65% 7 items									65%	

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Developing



Secure

MASTERY %



English



Spanish

QUESTIONS ASKED

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7th Grade Classroom Data Sample by Student

Q2

Q2:B

				Question Number									
				1	2	3	4	5	6	7	8	9	10
				Correct Answer									
				Standard									
				MAFS.7.NS.1.2 Understand	MAFS.7.NS.1.3 Understand	MAFS.7.NS.1.1 Apply	MAFS.7.NS.1.3 Apply	MAFS.7.NS.1.2 Understand	MAFS.7.NS.1.3 Describe	MAFS.7.NS.1.3 Apply	MAFS.7.NS.1.1 Understand	MAFS.7.NS.1.1 Describe	MAFS.7.NS.1.2 Apply
First Name	Last Name	Multiple Choice	Overall Proficiency	1	2	3	4	5	6	7	8	9	10
Kate	Smith	80%	80%		d						a		
Amber	Giles	90%	90%								d		
Kendra	Jones	80%	80%	a							a		
Miguel	Alba	90%	90%								a		
Paul	Bell	40%	40%	d	b			a	c			c	a
Amy	Milk	70%	70%		a	c			b				
Daniel	Peck	70%	70%			b		b				d	
Chris	Wynn	90%	90%								d		
Lola	Lang	40%	40%	d	d	c	b			d		d	
Rob	Heart	50%	50%			d	c	a	c				c
Gabe	Snipe	100%	100%										
Cassy	Dole	60%	60%			b		c	c	d			
Nicole	Smith	90%	90%									c	
Lindsy	Doll	60%	60%				c			d	d	a	
Tyler	Miles	30%	30%		b	b	a		b	b	b	c	
Percentage correct		69%	69%	80%	67%	60%	74%	74%	67%	74%	54%	60%	87%

Decisions

What to do if Rtl is:

- **Positive**

- Continue intervention with current goal
- Continue intervention with goal increased
- Fade intervention to determine if student(s) have acquired functional independence.

1

Decisions

What to do if Rtl is:

- **Questionable**

- Was intervention implemented as intended?
 - If no - employ strategies to increase implementation integrity
 - If yes -
 - Increase intensity of current intervention for a short period of time and assess impact. If rate improves, continue. If rate does not improve, return to problem solving.

2

Decisions

What to do if Rtl is:

- **Poor**

- Was intervention implemented as intended?
 - If no - employ strategies in increase implementation integrity
 - If yes -
 - Is intervention aligned with the verified hypothesis? (Intervention Design)
 - Are there other hypotheses to consider? (Problem Analysis)
 - Was the problem identified correctly? (Problem Identification)

3